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Substitut	e for form 1449A/F	ग०	•	Complete if Known		
•				Application Number	09/811,358	
INFO	RMATIO	N DIS	CLOSURE	Filing Date	March 16, 2001	
STA	TEMENT	BY A	PPLICANT	First Named Inventor	Gregory L. Merril	
<b>U</b> .,.	• =			Art Unit	3739	
	(use as many s	sheets as	necessary)	Examiner Name	John P. Leubecker	
Sheet	11	of	3	Attorney Docket Number	IMMR022/01US	

		Document Number			
Examiner	Cile No.'	Number Kind Code <sup>9</sup> (# known)	Publication Data	Nams of Patentee or Applicant of Clad Document	Pages, Columns, Lines, Where Relevant Passages of Relevant Figures Appear
20-	-	6,422,941	7/23/2002	Thomer at at.	
1		6,160,489	12/12/2000	Perry et al.	
		6.111,577	8/29/2000	Zilles et el.	
		5,690,582	11/25/1997	Ulrich et al.	
		5,575,761	11/19/1996	Hajianpour	
		5,437,607	8/1/1995	Taylor	
		5,436,622	7/25/1995	Gulman et al.	-
		5,283,970	2/8/1994	Algner	
		5,180,695	2/16/1993	Mangseth et al.	·
		5,175,459	12/29/1992	Danlal et al.	
		5,165,897	11/24/1092	Johnson	
		5,022,384	6/11/1991	Freels	
		4,885,565	12/5/1989	Embach	
		4,484,191	11/20/1984	Vavra	
		4,484.117	<u>8/7/1984</u>	Foerst	
		4,933,070	6/1/1982	Barnes	
		4,262,549	4/21/1981	Schwellenbach	<b>.</b>
	<u> </u>	4,127,752	11/28/1978	Lowthorp	
V		2,972,140	2/14/1961	Hirsch	
m	1	2001/0016804	08/23/01	Cunningham et al.	

Examiner Intitals*	Cite No.1	Foreign Patent Document			Name of Patentee or	Pages, Columns, Lines, Where Relevant	
		Country Code	Number <sup>4</sup>	Kind Code <sup>®</sup> (if known)	Publication Date MM-DD-YYYY	Applicant of Cited Document	Passages or Relevant Figures Appear
À		JP	H2-185278		7/19/1990	Talto Corporation	
9-		JP	H4-8381		1/13/1992	Epoch Co. and Key- Planning Co.	
7		J₽	H7-24147		1/27/1995	Sega Corporation	
XX		JP	H5-192449		8/3/1993	Talto Corporation	

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Examiner Signature	J LEUBECKER	Date Considered 7/8/04	_]

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	Substitute	for form 1449A/P1	го		Complete if Known			
					Application Number	09/811,358		
	INFO	RMATION	I DIS	CLOSURE	Filing Date	March 16, 2001		
	STATEMENT BY APPLICANT				First Named Inventor	Gregory L. Merril		
	• • • • •				Art Unit	3739		
		(use as many si	heets as	necessary)	Examiner Name	John P. Leubecker		
$\overline{}$	Sheet	2	of	3	Attorney Docket Number	IMMR022/01US		

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-lessue number(s), publisher, city and/or country where published.	
6		PATRICK, "Design, Construction, and Testing of a Fingerip Tactile Display for Interaction with Virtual and Remote Environments," Master of Science Thesis, MIT, Aug. 1990, archived Nov. 8, 1990.	
i		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," Bachelor of Science Thesis, MIT, May 1983, profived June 23, 1983.	
		WIKER, "Teletouch Display Development: Phase 1 Report," Technical Report 1230, Naval Ocean Systems Center, San Diego, July 1888.	
		BLISS, "Optical-to-Tactile Image Conversion for the Blind," IEEE Transactions on Man-Machine Systems, Vol. MMS-11. No. 1, March 1970.	
	· · · ·	JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," Armstrong Aerospace Medical Research Laboratory, AAMRL-TR-90-039, August, 1990.	
		KONTARINIS et al., "Tactila Display of Vibratory Information in Teleoperation and Virtual Environments," PRESENCE, 4(4):387-402, Harvard Univ., 1995.	
		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality." ISBN 0-938151-62-7, pp. 129-180, 1992.	
		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1, ASME 1994.	
		GOBEL et al., "Tactile Feedback Applied to Computer Mice," International Journal of Human-Computer Interaction, Vol. 7, No. 1, pp. 1-24, 1995.	
		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 <sup>nd</sup> Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.	
		*Cyberman Technical Specification,* Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide, 4/5/1994.	
		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and its Use in the Virtual Reality Environment," Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95, Seoul, Korea, 21-24 August 1995.	
		KACZMAREK et al., "Tactile Displays," Virtual Environment Technologies, Chap. 9, pp. 349-414.	
V		LAKE, "Cyberman from Logitech," at http://www.lblbllo.org/GameBytes/lssue21/greviews/cyberman.html, 1994.	
8~	-	*Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part no. C-25502,* Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages).	

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Examiner Signature	) LEUBECKER	Date Considered	7/8/04	

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of

Complete if Known **Application Number** 09/811,358 March 16, 2001 First Named Inventor Gregory L. Merril <u>3</u>739 Examiner Name John P. Leubecker IMMR022/01US Attomey Docket Number

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS						
Examiner	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.				
2		*Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part no. C-25502,* Safe Right Instrument Corporation, Revised 16 July 1980 (23 pages).				
]		\$CANNELL, 'Taking a Joystick Ride,' Computer Currents, Boston Edition, Vol. 9, No. 11, November 1994				
		YAMAKITA et al., 'Tele-Virtual Reality of Dynamic Mechanical Model," Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems, Raleigh, NC, July 7-10, 1992				
		NOLL, "Man-Machine Tactile," SID Journal, July/August 1972 Issue.				
500		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.				

Examiner Signature	J LENBREKER	Date Considered	7/8/04	

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